

WHEEL ASSEMBLIES FOR USE WITH LOAD BEARING PLATFORMS

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This application is a continuation-in-part of pending U.S. patent application
Serial No. 10/078,403 that was filed on February 21, 2002 ^{now USPN 6,609,719,} which, in turn, is a
continuation-in-part of US Patent No. 6,357,765, filed on August 3, 2000 and
issued on March 19, 2002.

Technical Field:

This invention relates to wheel assemblies that are used to support load
10 carrying platforms with increased safety, particularly when traversing rough
surfaces and rolling over small obstacles.

More particularly, this invention relates to wheel assemblies that provide
load carrying platforms with means to roll across small obstacles without wheel
drag, and to provide braking means for the platform.

15 Background Art:

A large variety of load bearing platforms are used in industry to transport
goods from one place to another or to serve as mobile instrument or tool stations
and the like. Such platforms are typically supported upon casters or wheel
assemblies, either fixed or swiveling, to provide a rolling support for the platforms.

20 A problem frequently faced in the use of such platforms is the tendency for
wheels to drag when encountering small obstacles such as construction debris,
uneven floor or sidewalk joints, and the like. That problem is particularly acute with
platforms used in work environments in which the platform must cross electrical
cords or pneumatic hoses that power other equipment. Further, cargo carrying
25 platforms are sometimes loaded beyond their safe capacity, thus creating another
hazardous condition.

There are a number of different wheel assemblies in the prior art that
propose to address those problems. For example, wheel assemblies that include
a primary wheel carrying a plurality of smaller, secondary wheels are shown in
30 U.S. Patent No. 3,208,544 to Colvin; U.S. Patent No. 1,326,679 to Macbeth et al;
U.S. Patent No. 795,620 to Jones; and U.S. Patent No. 722,433 to Ritchie. Wheel
assemblies employing braking means used in association with walkers are
described in U.S. Patent No. 6,068,273 to Rao et al; in U.S. Patent No. 5,112,044
to Dubats; and in U.S. Patent No. 5,020,560 to Turbeville.